

REMARKS/ARGUMENTS

Claims 1-21 are pending in the application. Claims 1, 11, and 21 have been amended. Reconsideration is respectfully requested. Applicant submits that the pending claims 1-21 are patentable over the art of record and allowance is respectfully requested of claims 1-21.

The Abstract of the Specification is objected to. Applicants have amended the Abstract to overcome the objection and place the Abstract in better form.

Claims 1-21 are rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter because they do not produce a tangible result. Applicants respectfully traverse, but, to expedite prosecution, Applicants have amended the claims.

Applicants have amended claims 1, 11, and 21 to indicate that the query is executed to retrieve data from one or more data stores (e.g., Specification, page 5, paragraph 15; pages 5-6, paragraphs 17-18).

Claims 11-20 are rejected as being directed to non-statutory subject matter. Applicants have amended claim 11 to recite an article of manufacture comprising one of hardware logic and a computer readable medium including a program for executing a query, wherein the hardware logic or program causes operations to be performed. For example, the Specification, on page 34, paragraph 78 states:

The term "article of manufacture" as used herein refers to code or logic implemented in hardware logic (e.g., an integrated circuit chip, Programmable Gate Array (PGA), Application Specific Integrated Circuit (ASIC), etc.) or a computer readable medium, such as magnetic storage medium (e.g., hard disk drives, floppy disks,, tape, etc.), optical storage (CD-ROMs, optical disks, etc.), volatile and non-volatile memory devices (e.g., EEPROMs, ROMs, PROMs, RAMs, DRAMs, SRAMs, firmware, programmable logic, etc.). Code in the computer readable medium is accessed and executed by a processor.

Claims 3 and 13 are rejected under 35 U.S.C. 112, second paragraph. Applicants have amended claims 3 and 13 to overcome the rejection.

Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Larson et al. (U.S. Patent No. 6,850,933). Applicants respectfully traverse.

The Larson patent is directed to an efficient view matching method (Col. 1, lines 64-65). The Larson patent does not address the use of outlier materialized query tables.

On the other hand, claims 1, 11, and 21 describe matching a query to an outlier materialized query table that stores exception data (e.g., Specification, pages 2-3, paragraph 8). Also, at Col. 16, lines 55-61, the Larson patent describes that multiple views may be used to evaluate a query. There is no description in the cited portion of the Larson patent of the claimed outlier materialized query table that stores exception data.

Claims 1, 11, and 21 also describe searching the query for a source predicate. The Larson patent at Col. 16, lines 4-8, describes a matching function that compares predicates converted to text strings, omitting column references, and then matches column references separately. There is no description in the cited portion of the Larson patent of a search for a source predicate in the query.

Moreover, claims 1, 11, and 21 describe searching an outlier predicate in the outlier materialized query table that corresponds to the source predicate for a target column that corresponds to a source column in the source predicate (e.g., Specification, page 27, paragraph 65). The Larson patent at Col. 16, lines 62-67, describes that secondary indexes defined on a materialized view are desirably considered in the same way as for base tables and that techniques of the present invention can be extended to a broader class of input and substitute expressions. There is no description in the cited portion of the Larson patent of searching an outlier predicate in the outlier materialized query table that corresponds to the source predicate for a target column that corresponds to a source column in the source predicate.

In addition, claims 1, 11, and 21 describe deriving a new range predicate based on the target column and introducing the new range predicate into the query, wherein the query is executed to retrieve data from one or more data stores. The Larson patent at Col. 16, lines 29-35 describes that speed is crucial because the view matching algorithm may be called many times during optimization of a complex query. The Larson patent at Col. 8, lines 1-8, describes that if a query range matches the corresponding view range, no further restriction is needed; if the lower bound does not match, the view result is restricted by enforcing the predicate $(T.C \geq lb)$; and, if the upper bounds differ, the predicate $(T.C \leq ub)$ is enforced. There is no description in the cited

portion of the Larson patent of deriving a new range predicate based on the target column (which is in an outlier predicate in the outlier materialized query table) and introducing the new range predicate into the query, wherein the query is executed to retrieve data from one or more data stores.

Therefore, Applicants respectfully submit that claims 1, 11, and 21 are not anticipated by the Larson patent.

Dependent claims 2-10 and 22-20 incorporate the language of independent claims 1 and 11 and add additional novel elements. Therefore, dependent claims 2-10 and 22-20 are not anticipated by the Larson patent for at least the same reasons as were discussed with respect to claims 1 and 11.

Conclusion

For all the above reasons, Applicant submits that the pending claims 1-21 are patentable over the art of record. Applicants have not added any claims. Nonetheless, should any additional fees be required, please charge Deposit Account No. 09-0460.

The attorney of record invites the Examiner to contact her at (310) 553-7973 if the Examiner believes such contact would advance the prosecution of the case.

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